CLAIMS

1. An air spring (1) for absorbing and transmitting shock loads between parts moveable relative to one another, the air spring (1) comprising a flexible cylindrical sleeve (2) which is secured at each end to form a fluid chamber (14) therein, a piston (11), the sleeve (2) being secured at one end (6) to a retainer (8), the air spring being characterized by:

the retainer (8) having an intermediate ribbed reinforcement structure (16) to strengthen the retainer, allowing for direct mounting of the air spring (1) to one of the moveable parts.

2. An air spring (1) in accordance with claim 1 wherein the retainer is further characterized by the intermediate ribbed reinforcement structure (16) comprising a plurality of extending ribs (17 or 20).

3. An air spring (1) in accordance with claim 2 wherein the retainer is further characterized by the ribs (17 or 20) extending the full width of the intermediate reinforcement structure (16).

4. An air spring (1) in accordance with claim 1 wherein the intermediate ribbed reinforcement structure (16) is further characterized by two sets of ribs (17 or 20) extending at angles relative to each other (20 or 17).

5. An air spring (1) in accordance with claim 1 wherein the retainer (8) is further characterized by being formed from a thermoplastic material having a tensile strength in the range of 1965 to 3165 kg/cm^2 (28,000 to 45,000 psi), and a flex strength in the range of 2810 to 4220 kg/cm^2 (40,000 to 60,000 psi).

6. An airspring (1) in accordance with claim 5 wherein the retainer (8) is further characterized by being formed from a material selected from the following group: fiberglass reinforced nylon, long fiber reinforced thermoplastic, and short fiber reinforced thermoplastic.

An air spring (1) in accordance with claim 1 wherein the retainer (8) is further characterized by air inlet means (21, 23) that extends through the intermediate ribbed reinforcement structure (16).

8. An air spring (1) in accordance with claim 1 wherein the intermediate ribbed reinforcement structure (16) of the retainer (8) is further characterized by an outer plate (18) and an inner plate (19), and a plurality of ribs (17 or 20) which extend between the outer plate (18) and the inner plate (19).

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